

Worksession

MEMORANDUM

November 17, 2011

TO: Government Operations and Fiscal Policy Committee

FROM: Dr. Costis Toregas, Council IT Adviser

SUBJECT: Discussion: Enterprise Resource Planning (ERP) system

The following are expected to attend:

Joe Beach, Director, Department of Finance  
Jennifer Hughes, Director, Office of Management and Budget  
R. Steven Emanuel, Chief Information Officer  
Michael Ferrara, Executive Director of Enterprise Projects  
Karen Plucinski, Manager, ERP/Change Management & Organizational Development, Office of Human Resources

**Summary of Staff Recommendations**

1. **Request** a plan, including timelines and investment requirements (either as a supplemental request in FY12 or as a priority request in FY13), which will deploy a "Sustaining Organization" for ERP in order to promote continuous business process improvement and resolve post-implementation issues before they arise.
2. **Request** that the Office of Human Resources take the anecdotal information provided by the Finance Department concerning turnover rates and difficulty of finding contractual resources and develop a strategy for the go-forward organization after ERP is fully deployed.
3. **Discuss** the system retirement status of the more than 300 systems that were identified before ERP implementation begun.
4. The Change Management and Organizational Development office should undertake a "Go live + 12 months" round of interviews with each ERP user department and **develop an analytic report for the Committee** describing the status of implementation, problems not yet overcome, and resource requirements to resolve them.

## Overview

On November 8, 2011, the Audit Committee reviewed a request to amend the County's audit contract with Clifton Gunderson in order to provide additional resources to satisfactorily close books on FY11 and perform the annual Comprehensive Annual Financial Report (CAFR). In the discussion that ensued, a request was made that the Government Operations and Fiscal Policy (GO) Committee schedule a session to review the status of the ERP (Enterprise Resource Planning) project and its role in the delays that led to the additional contract extension. This discussion responds to the request.

The ERP is part of a major initiative the County began in 2008 to modernize operations with the application of modern technologies. This initiative, called Technology Modernization (TechMod), is budgeted at the \$80m level within the Capital Improvements Program (CIP), and the FY11 project description form is shown on © 1-2. ERP is by far the largest project within the TechMod effort.

The most important objective of the ERP project was to upgrade and modernize the technology infrastructure of the most important systems: finance, human resources, and procurement. This upgrade would also have cost savings potential in terms of streamlined processes and IT system consolidation, but the primary objective was and continues to be the development and support of the fundamental "work horse" systems vital to County operations using modern technologies and concepts.

The Executive branch provided a memo on November 16, 2011 (© 3-7) that details the project implementation, lessons learned, ERP and financial accomplishments and retirements of legacy systems; representatives from the Administration will be available to expand on each section.

## Staff Comments

1. Project implementation
  - a. The ERP has been delivered on time and on budget. Given the complexity of the system and the simultaneous execution of another enterprise-wide system of similar complexity (the MC311 system), the County is unique in having successfully executed this twin challenge.
  - b. The difficulty in post-implementation areas that caused the book-closing problems is linked to training of end users and managing departments, knowledge transfer between consultants and staff, and administering financial programs – and not to the technology implementation. This recognition is vital as the Administration organizes ways to fix the difficulties recognized to date.
2. Lessons learned
  - a. Change management and knowledge transfer investments were not adequate to the tasks at hand; this recognition, using 20-20 hindsight, is useful for other counties that may want to learn from our experience, but the note from Mr. Beach does not say how this shortcoming is to be cured in the future here in Montgomery County. Will there be training programs developed? And is there a budget for them?
  - b. Lack of engagement of core business departments (Finance, OMB, OHR, DGS) is also singled out as a problem. Again, the way to heal this problem as the system moves forward is not clear. Of concern is the fact that the CIP 6-year projection shows \$0 invested in years FY13-16. Certainly the fiscal situation is dire, but after making an initial investment of \$80m, the post-implementation period is vital and needs to be

carefully supported. The Committee should be prepared to support requests for additional TechMod expenditures in the out years in order to ensure our investment does not end up being frustrated by inadequate support during the phase of human adaptation and adoption of the new strategies and capabilities.

3. Sustaining organization
  - a. The notion of a sustaining organization as presented is certainly a worthwhile and wise investment. However, it is not clear that the Executive branch is prepared to deploy such an organizational element. Given the lack of resources in FY13-16 as mentioned above, it is hard to imagine the launch of such an organization. A budget and funding strategy should be developed and presented rapidly if the CAFR difficulties are to be avoided in other segments of ERP implementation.
4. Testing across modules
  - a. This section is of historical importance but has no explicit value on the future deployment patterns of ERP. The principle of careful operational testing can, of course, inform other future projects.
5. Turnover and position abolishments
  - a. The high turnover rates in many functional areas can have major negative effects on processes and performance for a long time to come. The existence of ERP itself means that the skill sets the County will need not only to support the IT systems but to execute the new, streamlined processes in Finance, Procurement, Budget, and HR have changed significantly. And yet it is not clear that the labor resources of the County have been aligned to these new skill sets through retraining, promotions, and new hires. OHR should perform a study to analyze the impact of ERP on future labor requirements so that proper investments are made in FY13 and beyond.
6. ERP accomplishments
  - a. The list is impressive and speaks for itself.
7. Retirement of legacy systems
  - a. The list of retired systems already in the first year of implementation is long and is a reminder of the cost-saving benefits of ERP implementation. However, there are many more systems that can be retired and many redundant processes that can come to an end; such changes will not happen unless the analysis done in 2007-08 to identify the 300 or so systems marked for retirement can be brought back and compared with today's reality. Implementing and benefiting from ERP is probably a higher priority, but a small skunk-works team could probably be very effective in identifying internal departmental systems whose time for retirement may have come and passed. The Executive branch may already have such an effort under way, and it would be useful to hear their preliminary methodology and results to date beyond the examples shared in the memo.

# Technology Modernization -- MCG -- No. 150701

Category  
Subcategory  
Administering Agency  
Planning Area

General Government  
County Offices and Other Improvements  
County Executive  
Countywide

Date Last Modified  
Required Adequate Public Facility  
Relocation Impact  
Status

March 11, 2011  
No  
None.  
On-going

## EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY10	Rem. FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Planning, Design, and Supervision	80,979	40,887	11,517	28,575	17,095	11,480	0	0	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>80,979</b>	<b>40,887</b>	<b>11,517</b>	<b>28,575</b>	<b>17,095</b>	<b>11,480</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## FUNDING SCHEDULE (\$000)

Current Revenue: General	42,856	25,234	92	17,530	11,462	6,068	0	0	0	0	0
Land Sale	2,634	2,634	0	0	0	0	0	0	0	0	0
Short-Term Financing	35,489	13,019	11,425	11,045	5,633	5,412	0	0	0	0	0
<b>Total</b>	<b>80,979</b>	<b>40,887</b>	<b>11,517</b>	<b>28,575</b>	<b>17,095</b>	<b>11,480</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## OPERATING BUDGET IMPACT (\$000)

Maintenance				37,573	6,036	8,527	11,336	11,674	0	0
Productivity Improvements				-20,000	0	0	-5,000	-15,000	0	0
<b>Net Impact</b>				<b>17,573</b>	<b>6,036</b>	<b>8,527</b>	<b>6,336</b>	<b>-3,326</b>	<b>0</b>	<b>0</b>

## DESCRIPTION

This project provides for the replacement, upgrade, and implementation of IT initiatives that will ensure ongoing viability of key processes, replace outdated and vulnerable systems, and produce a high return in terms of customer service and accountability to our residents. Major new IT systems being launched through this project are Enterprise Resource Planning (ERP), 311/Constituent Relationship Management (CRM), related Business Process Review (BPR) and planning activities for a new Department of Health and Human Services IT system to better support client services. ERP will modernize our Core Business Systems to improve the efficiency, effectiveness, and responsiveness of the County Government. The ERP project will provide needed upgrades to the County's financial, procurement, human resource, and budgeting systems and will streamline existing business processes. Business Process Review is occurring as part of ERP requirements analysis and planning. The first phase of this project, MCTime, the implementation of electronic time reporting, is well underway. A new 311/CRM system will combine advanced telephony, internet, and computer technology with constituent-focused business processes. Residents will ultimately be able to call one number to access County government services and built-in tracking and accountability features will assure that every call receives a timely response. Completion of Phase I of the current MC311 (CRM) will include developing an automated service request processing system for the County's Department of Transportation including converting the systems currently used for leaf pick-up, snow removal, tree issues, and street light outages. A competent application support organization will be included as part of MC311 to maintain the mission-critical application without interruption to business users.

## COST CHANGE

Increase due to the addition of planning funds for the Department of Health and Human Services Client Services IT project (\$300k) and application support organization for MC311 (\$470k).

## JUSTIFICATION

According to a 2004 ranking of major existing technology systems based on their current health and relative need for upgrade or replacement, the County's current core business systems (ADPICS, FAMIS, BPREP, and HRMS) were ranked as Priority #1, which means "obsolete or vulnerable critical system in immediate risk of failure." These at-risk systems will be replaced with a state of the art ERP system which will provide a common database supporting financials, procurement, budget, and HR/payroll, and will include system-wide features for security, workflow, and reporting, and up-to-date technology architecture. Montgomery County seeks to set a national standard for accountability and responsiveness in governance and the delivery of services to its residents and businesses. A customer-oriented 311/CRM system is needed as a single one-stop-shop phone number and intake system to meet this growing demand. A competent application support organization is required to maintain the mission-critical application: without interruption to business users; to ensure high-availability to customers; to provide assistance to end-users; and to ensure that desired business process changes to the MC311 solution can be reengineered, implemented and deployed. The current cost estimate is based on detailed review of integrator, staffing, hardware, and software costs.

Information Technology Interagency Funding and Budgeting Committee's report of September 30, 2003.  
MCG FY06 IT Budget Overview prepared by DTS.

## OTHER

The Technology Modernization - MCG project has been intended to serve as an ongoing resource for future IT modernization to the County Government's

## APPROPRIATION AND EXPENDITURE DATA

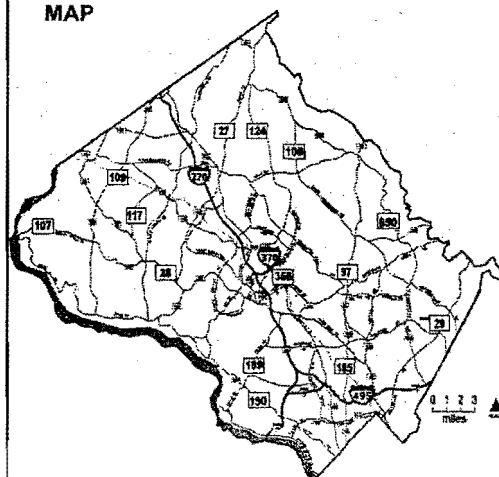
Date First Appropriation	FY07	(\$000)
First Cost Estimate	FY12	80,979
Current Scope		
Last FY's Cost Estimate		80,209
Appropriation Request	FY12	5,308
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		75,671
Expenditures / Encumbrances		59,092
Unencumbered Balance		16,579
Partial Closeout Thru	FY09	0
New Partial Closeout	FY10	0
Total Partial Closeout		0

## COORDINATION

MCG efforts must be coordinated with the recent implementation of a new Financial Management System by MCPS and efforts by other agencies to ensure data transportability and satisfy reporting needs between agencies. Project staff are drawing on the implementation experiences of MCPS, WMATA and governments with functions and components similar to MCG during the project planning, requirements gathering, and requests for proposal (RFP) phases.

Offices of the County Executive  
Office of the County Council  
Department of Finance  
Department of Technology Services  
Office of Procurement  
Office of Human Resources  
Office of Management and Budget  
Department of Health and Human Services  
All MCG Departments and Offices

## MAP



## Technology Modernization -- MCG -- No. 150701 (continued)

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business systems beyond the currently defined project scope. Future projects may include the following:

CRM

Phase II: This initiative will extend the service to municipalities in the County, and other County agencies (e.g. Board of Education, M-NCPPC, Montgomery College). This initiative will proceed based upon interest from these organizations and agreement on funding.

Creation of a Citizen Relationship Management (CRM) program which will develop or convert automated capabilities for all appropriate County services including:

Case Management

Events Management

Field Services

Grants Management

Help Desk Solutions

Point of Sales

Resident Issue Tracking System

Work Order Processing System

ERP

Business Intelligence/Data Warehouse Development

Loan Management

Property Tax Billing and Collection

Public Access to Contractor Payments

Upgrade to Oracle E-Business/Kronos/Siebel

Enhancements to comply with evolving Payment Card Industry (PCI) mandates

### FISCAL NOTE

Project funding includes short-term financing for integrator services and software costs. Operating Budget Impact revised in FY13 and FY14 to reflect Council productivity targets.



DEPARTMENT OF FINANCE

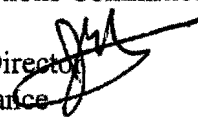
Isiah Leggett  
County Executive

Joseph F. Beach  
Director

MEMORANDUM

November 16, 2011

TO: Nancy Navarro, Chair  
Government Operations Committee

FROM: Joseph F. Beach, Director  
Department of Finance 

SUBJECT: Status of Enterprise Resource Planning Project

**Project Implementation**

This memo is intended to provide the Government Operations (GO) Committee with an update on the status of the Enterprise Resource Planning (ERP) project based on the Finance Department's recent request for Council approval of a contract amendment with Clifton Gunderson. As mentioned at the recent Audit Committee meeting on the contract amendment, I believe the ERP project has been very successful. As detailed below, we have implemented the ERP project on time and within budget including replacement of all core financial systems, payroll, human resource management, as well as implementation of electronic timekeeping in all departments. We are continuing to implement new modules to enhance the functionality of the system and develop reports to allow departments to track and manage their budgets.

However, this has been an extremely challenging project and we have experienced certain post implementation issues that are not uncommon for this type of complex project. Among these challenges have been implementing and managing significantly different business processes under the new ERP system. The transition from the County's fragmented, mainframe based legacy systems and the tightly integrated ERP system has been a challenge for training (end users and managing departments), knowledge transfer (between Consultants and County staff), and administering financial programs. Since the go-live date for the financial systems on July 6, 2010 and the go-live for the human resource system on January 1, 2011 we are implementing several "first-time" processes under the new system including year end closing and production of the Comprehensive Annual Financial Report (CAFR), production of W2 tax reporting forms, group insurance open enrollment and other major enterprise processes. This presents challenges in terms of communication, training, and problem resolution.

**Office of the Director**

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## Lessons Learned

Reports: One of the challenges we have experienced this year has been the need to reproduce reports that had been routinely used under the legacy system for several years. In order to expedite completion of other tasks and conserve resources on the project a decision was made to produce reports after the go-live date. On hindsight, availability of certain reports would have permitted the ERP team and departments to identify process implementation issues earlier and would have provided end users access to information about the status of their budgets.

Change Management/Knowledge Transfer: As mentioned previously, the County's transition to ERP was a major change from the legacy systems. Additional investments in change management and knowledge transfer would have better prepared County staff for the magnitude of change, the complexities of the new system, and facilitated adoption of the new system and business processes. In addition, a more concentrated effort with the "core business" departments (Finance, OMB, OHR, DGS-Procurement) should have been engaged along with the departmental end-users. The reason for this is that core business departments are the business process leaders within the government and are essential to system adoption as well as to identifying and resolving process and system issues.

Sustaining Organization: The County was very successful in preparing for and implementing the new system on time and under budget. However, a substantial investment in resources are needed post implementation to resolve problems, facilitate communication across business processes because of the system integration, produce reports, and re-engineer business processes. The Government Finance Officers Association (GFOA) and Gartner (a premier IT consulting organization) recommend that organizations implementing an ERP also establish an enterprise business support structure (often called a sustaining organization or Enterprise Service Center) after project implementation to maintain, enhance, and focus on: business strategy, functional / technical expertise, software integration, technology, project management and continuous process improvement. Investing in a sustaining organization is key to fully exploiting the capabilities of the new ERP system.

Testing Across Modules: Before go-live on all systems and modules, extensive testing was done to ensure the system specifications were satisfied. However, with the tightly integrated nature of the ERP system, it would have been beneficial to have performed additional testing across certain modules (for examples General Ledger and Projects and Grants) to identify process and system issues that were identified after system implementation.

Turnover and Position Abolishments: While the implementation of the ERP system will allow the County to operate in a more efficient, streamlined manner, the transition to the new system has been affected significantly by turnover in key positions within the Department of Finance and across the government as well as the abolishment of hundreds of administrative, fiscal, information technology (IT), and clerical positions within the government over the past four years due to severe economic and fiscal constraints. The Controller's Division in the Department of Finance has experienced a significant turnover in its staff over the past year primarily due to retirements. This loss of expertise and experience has created significant

challenges during the very difficult transition from the County's legacy systems to the ERP system. In addition, because of the very competitive market for individuals with the functional and IT experience in ERP systems it has been difficult to recruit and retain contractual resources to remain on the ERP project.

### **ERP Accomplishments**

Below I have listed in detail the many accomplishments and successes of the ERP project as well as the remaining tasks for this year:

#### **Objectives Accomplished:**

- Implementation on time and within budget (ERP Financials, Human Capital Management)
- Core Business Enterprise Legacy systems replaced
- Standardized and automated processes using a single, integrated computer system
- System Workflow and Approvals implemented to reduce manual, paper business processes and enhance internal controls
- Integrated business process sharing a centralized database and servers
- Internal controls with electronic timesheets and budgetary controls
- Self Service functionality for employees to access applications

#### **Oracle e-Business Financial and Human Capital Management modules implemented since July 2010.**

- General Ledger
- Accounts Payable
- Purchasing
- Accounts Receivable
- Cash Management
- Fixed Assets
- iAssets
- Projects and Grants
  
- Time and Attendance (MCtime)
- Active Employee Payroll
- Employee Self Service
- Manager Self Service
- Advanced Benefits
- Pension Administration
- Labor Distribution
- iRecruitment



### **Oracle e-Business modules being implemented in FY 12**

- Retiree Payroll
- Performance Management
- Compensation Workbench
- Learning Management
- Hyperion
- Inventory
- eAsset Management
- iExpense
- iSupplier
- Advanced Collection
- iReceivables

### **Financials Accomplishments**

- Implemented employee self service web portal
- Provided employees on-line pay slips, W2's, federal tax forms, etc. .
- Eliminated mailing of payroll advices for employees with computer access. Employees can access through self service web portal.
- Streamlined business processes in Payroll:
  - Retroactive pay process
  - Automation of Garnishment payments
  - W2 availability on-line (January 2012)
- Successfully implemented Budget Controls
- Streamline process for Journal and Budget entries, including elimination of manual paper processes
- Eliminate Finance from imaging approved Budget Change paper documents
- Prior to the new ERP budget change process, OMB was imaging the approved budget change packets (totaling over 800 annually), using the ZyImage document imaging process. The new ERP provides information on budget change approvals in the system and reports can be generated for auditors and reporting to end users

### **Retirement of Legacy Systems**

Prior to implementation of the ERP, the County identified 300 stand alone systems that departments were using for their core business processes. Many of these systems have been or will be retired with the implementation of the ERP system. Below is a list of retired systems,

licenses and software and the related savings that have already been realized in previous budgets approved by the County Council.

Eliminate paper timesheet process for department end users (MCtime)	\$416,580
Eliminate Merkel Timesheet Key punching contract – pre ERP implementation	\$325,000
Elimination of ADPICS (procurement) software and maintenance	\$70,000
Elimination of annual license fee and support for ePerform	\$260,000
Eliminate contract costs related to ePAF (position action form), Unified Data Modeler (identity management), and pension and benefit applications	\$300,000
Eliminate Human Resource Management System (HRMS) annual license/maintenance agreement with Integral	\$175,000
Eliminate PeopleClick applicant tracking contract	\$200,000
Eliminate annual license fees for SAS (statistical analysis software used in HR and financial applications)	\$115,000
Eliminate Mainframe After-hours Operations	\$802,810
Eliminate Mainframe Disaster Recovery and reduce Mainframe licensing/maintenance	\$190,000

I look forward to discussing this project with the GO Committee at the meeting scheduled for November 21.

copies:

Valerie Ervin, Council President  
Hans Riemer, Government Operations Committee  
Timothy L. Firestine, CAO  
Costis Toregas, Council Staff  
Steve Emanuel, Chief Information Officer  
David Dise, Director, Department of General Services  
Joseph Adler, Director, Office of Human Resources  
Jennifer Hughes, Director, Office of Management and Budget  
Karen Plucinski, Acting Project Director, Technology Modernization Project